

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:
computing a plurality of random noise samples;
~~storing the plurality of random noise samples in a lookup table;~~
detecting for a voice activity in a signal; and
if the voice activity is not detected, encoding a first data frame of the signal to create a first non active voice frame, including
generating a first excitation based on the plurality of random noise samples ~~of the lookup table,~~ and
generating the first non active voice frame based on a scale factor and the first excitation; and
after encoding the first data frame of the signal, reusing the ~~lookup table~~ already generated first excitation to encode a next each subsequent data frame of the signal
subsequent to the first data frame only if the next data frame of the signal is not an active voice data frame, the reusing until a voice activity of the signal is detected, each encoding of a respective subsequent data frame of the signal including
altering the scale factor based on any change in a noise condition of the signal,
~~generating a second excitation based on the plurality of random noise samples of the lookup table, and~~
generating a ~~second~~ respective non active voice frame based on the scale factor and the ~~second excitation~~ already generated first excitation of the first data frame.
2. (Previously Presented) The method of claim 1 further comprising padding an excitation with zeros if a gain of a frame of the non active voice signal is zero.
3. (Original) The method of claim 2 further comprising generating random adaptive codebook parameters and fixed codebook parameters.

4. (Currently Amended) The method of claim 3 wherein ~~computing~~ generating the first excitation includes:

generating a random adaptive excitation based on the random adaptive codebook parameters;

computing a sum of the random adaptive excitation and one of the random noise samples; and

rescaling the sum of the random adaptive excitation and one of the random noise samples.

5. (Currently Amended) The method of claim 4 wherein ~~computing~~ generating the first excitation further includes:

computing a fixed codebook gain based on the fixed codebook parameters; and

updating the rescaled excitation with an algebraic-code-excited linear-prediction excitation.

6. (Original) The method of claim 1 wherein the random noise samples are Gaussian noise samples.

7. (Currently Amended) A storage medium comprising content, which when executed by an accessing machine, causes the accessing machine to implement a method comprising:

computing a plurality of random noise samples;

~~storing the plurality of random noise samples in a lookup table;~~

detecting for a voice activity in a signal; and

if the voice activity is not detected, encoding a first data frame of the signal to create a first non active voice frame, including

generating a first excitation based on the plurality of random noise samples ~~of the lookup table~~, and

generating the first non active voice frame based on a scale factor and the first excitation; and

after encoding the first data frame of the signal, reusing the lookup table already generated first excitation to encode a next each subsequent data frame of the signal subsequent to the first data frame only if the next data frame of the signal is not an active voice data frame, the reusing until a voice activity of the signal is detected, each encoding of a respective subsequent data frame of the signal including

altering the scale factor based on any change in a noise condition of the signal,
and

~~generating a second excitation based on the plurality of random noise samples of the lookup table, and~~

generating a ~~second~~ respective non active voice frame based on the scale factor and the ~~second excitation already generated first excitation of the first data frame.~~

8. (Currently Amended) The storage medium of claim 7 ~~comprising content, which when executed by an accessing machine, causes the accessing machine to implement the method further comprising padding an excitation with zeros if a gain of a frame of the non active voice signal is zero.~~

9. (Currently Amended) The storage medium of claim 8 ~~comprising content, which when executed by an accessing machine, causes the accessing machine to implement the method further comprising generating random adaptive codebook parameters and fixed codebook parameters.~~

10. (Currently Amended) The storage medium of claim 9 wherein ~~computing~~ generating the first excitation includes:

generating a random adaptive excitation based on the random adaptive codebook parameters;

computing a sum of the random adaptive excitation and one of the random noise samples; and

rescaling the sum of the random adaptive excitation and one of the random noise samples.

11. (Currently Amended) The storage medium of claim 10 wherein ~~computing~~ generating the first excitation further includes:

computing a fixed codebook gain based on the fixed codebook parameters; and
updating the rescaled excitation with an algebraic-code-excited linear-prediction excitation.

12. (Original) The storage medium of claim 7 wherein the random noise samples are Gaussian noise samples.

13. (Currently Amended) An apparatus comprising:

an encoder coupled to a communication channel wherein the encoder is to compute a plurality of random noise samples ~~and to store the plurality of random noise samples in a lookup table~~, the encoder further to encode, if a voice activity is not detected in ~~[[the]]~~ a signal, a first data frame of the signal to create a first non active voice frame, wherein the encoder is

to generate a first excitation based on the plurality of random noise samples of the lookup table, and

to generate the first non active voice frame based on a scale factor and the first excitation,

the encoder further to reuse the ~~lookup table~~ already generated first excitation after encoding the first data frame of the signal to encode ~~a next~~ each subsequent data frame of the signal ~~subsequent to the first data frame only if the next data frame of the signal is not an active voice data frame until a voice activity of the signal is detected~~, wherein for each encoding of a respective subsequent data frame of the signal the encoder is

to alter the scale factor based on any change in a noise condition of the signal,

~~to generate a second excitation based on the plurality of random noise samples of the lookup table~~, and

to generate a ~~second~~ respective non active voice frame based on the scale factor and the ~~second excitation~~ already generated first excitation of the first data frame; and

a voice activity detector coupled to the encoder to detect for a non active voice signal;
~~a decoder coupled to the communication channel, the decoder further comprising a~~
~~comfort noise generator to generate comfort noise if the voice activity detector detects the~~
~~non active voice signal.~~

14. (Currently Amended) The apparatus of claim 13, the ~~comfort noise generator~~ encoder further configured to pad an excitation with zeros if a gain of ~~a frame of the non active voice~~ signal is zero.

15. (Currently Amended) The apparatus of claim 14, the ~~comfort noise generator~~ encoder further configured to generate random adaptive codebook parameters and fixed codebook parameters.

16. (Currently Amended) The apparatus of claim 15, wherein ~~computing~~ generating the first excitation includes:

generating a random adaptive excitation based on the random adaptive codebook parameters;

computing a sum of the random adaptive excitation and one of the random noise samples; and

rescaling the sum of the random adaptive excitation and one of the random noise samples.

17. (Currently Amended) The apparatus of claim 16, wherein ~~computing~~ generating the first excitation further includes:

computing a fixed codebook gain based on the fixed codebook parameters; and
updating the rescaled excitation with an algebraic-code-excited linear-prediction excitation.

18. (Canceled).

19. (Previously Presented) The apparatus of claim 13 wherein the random noise samples are Gaussian noise samples.

20. (Currently Amended) A storage medium containing content which, when executed by an accessing machine, causes the accessing machine to generate:

an encoder coupled to a communication channel wherein the encoder is to compute a plurality of random noise samples ~~and to store the plurality of random noise samples in a lookup table~~, the encoder further to encode, if a voice activity is not detected in ~~[[the]]~~ a signal, a first data frame of the signal to create a first non active voice frame, wherein the encoder is

to generate a first excitation based on the plurality of random noise samples of the lookup table, and

to generate the first non active voice frame based on a scale factor and the first excitation,

the encoder further to reuse the ~~lookup table~~ already generated first excitation after encoding the first data frame of the signal to encode ~~a next~~ each subsequent data frame of the signal ~~subsequent to the first data frame only if the next data frame of the signal is not an active voice data frame until a voice activity of the signal is detected~~, wherein for each encoding of a respective subsequent data frame of the signal the encoder is

to alter the scale factor based on any change in a noise condition of the signal,

~~to generate a second excitation based on the plurality of random noise samples of the lookup table~~, and

to generate a ~~second~~ respective non active voice frame based on the scale factor and the ~~second excitation~~ already generated first excitation of the first data frame; and

a voice activity detector coupled to the encoder to detect for the non active voice signal;

~~a decoder coupled to the communication channel, the decoder further comprising a comfort noise generator to generate comfort noise if the voice activity detector detects the non active voice signal.~~

21. (Currently Amended) The storage medium of claim 20, the ~~comfort noise generator~~ encoder further configured to pad an excitation with zeros if a gain of a frame of the non active voice signal is zero.

22. (Currently Amended) The storage medium of claim 21, the ~~comfort noise generator~~ encoder further configured to generate random adaptive codebook parameters and fixed codebook parameters.

23. (Currently Amended) The storage medium of claim 22, wherein ~~computing~~ generating the first excitation includes:

generating a random adaptive excitation based on the random adaptive codebook parameters;

computing a sum of the random adaptive excitation and one of the random noise samples; and

rescaling the sum of the random adaptive excitation and one of the random noise samples.

24. (Currently Amended) The storage medium of claim 23, wherein ~~computing~~ generating the first excitation further includes:

computing a fixed codebook gain based on the fixed codebook parameters; and

updating the rescaled excitation with an algebraic-code-excited linear-prediction excitation.

25. (Canceled).

26. (Previously Presented) The storage medium of claim 20 wherein the random noise samples are Gaussian noise samples.

Claims 27 - 40. (Canceled).